

SERVICE MANUAL

COLOUR TELEVISION

AV-20RM4SE, AV-21RM4SE, AV-21RM4SP

Supplementary

The following items for the AV-20RM4SE, AV-21RM4SE, AV-21RM4SN and AV-21RM4SP were changed partly.

Therefore, this service manual describes only the items which differ from those of the AV-20RM4SE, AV-21RM4SN and AV-21RM4SP service manual.

For details other than those described in this manual, please refer to the AV-20RM4SE, AV-21RM4SE, AV-21RM4SP service manual (No.52056, 2005/2).

DIFFERENCE LIST

PRINTED WIRING BOARD PARTS LIST

MAIN P.W. BOARD ASS'Y

	Λ	Ref. No.	Part	No.	PART NAME	DESCRIPTION	
233	<i>-</i>	itel. No.	BEFORE	AFTER	PART NAME	DESCRIPTION	
Ī	Δ	TU201	VE-30009637	VE-30033888	TUNER	Non compatible	

SECTION 1 PRECAUTION

Please refer to "AV-20RM4SE, AV-21RM4SE, AV-21RM4SN and AV-21RM4SP (No.YA080)" about this section.

SECTION 2 SPECIFIC SERVICE INSTRUCTIONS

Please refer to "AV-20RM4SE, AV-21RM4SE, AV-21RM4SN and AV-21RM4SP (No.YA080)" about this section.

SECTION 3 DISASSEMBLY

Please refer to "AV-20RM4SE, AV-21RM4SE, AV-21RM4SN and AV-21RM4SP (No.YA080)" about this section.

SECTION 4 ADJUSTMENT

4.1 SETTING VALUES OF OPTION ITEMS

When a previous TUNER (VE-30009637) is replaced by a new TUNER (VE-30033888), it should be adjusted to the setting values in the table below. If the TUNER of the model with the new TUNER (VE-30033888) is replaced, there is no need for adjustment.

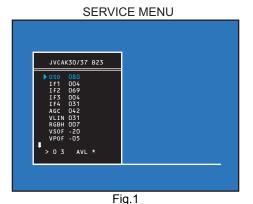
4.1.1 SETTING VALUE OF SETTING ITEM

Make sure not to change the values that are not in the table below. If those values are changed, the unit will not operate normally.

								Setting	yalue							
Item				BEF	ORE							AF	ΓER			
	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
F1H	0	0	0	0	1	0	0	1	0	0	0	0	1	0	1	1
F1L	1	0	0	1	0	0	1	0	0	1	0	1	0	0	1	0
F2H	0	0	0	1	1	0	1	1	0	0	0	1	1	1	0	1
F2L	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
BS1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
BS2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0
BS3	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0
СВ	1	0	0	0	1	1	1	0	1	0	0	0	1	1	1	0

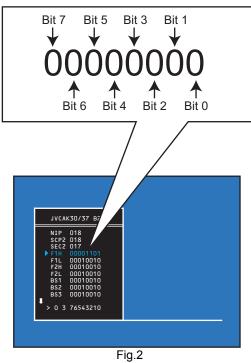
4.1.2 HOW TO ENTER THE SERVICE MODE

(1) Press the [INFORMATION] key and [MUTING] key simultaneously, and the SERVICE MENU screen will be displayed. (Fig.1)



4.1.3 HOW TO SELECT THE SETTING ITEM

While the SERVICE MENU screen is displayed, press the [\blacktriangle]/[\blacktriangledown] key and select the setting item.(Fig.2)



4.1.4 HOW TO CHANGE THE SETTING VLUE

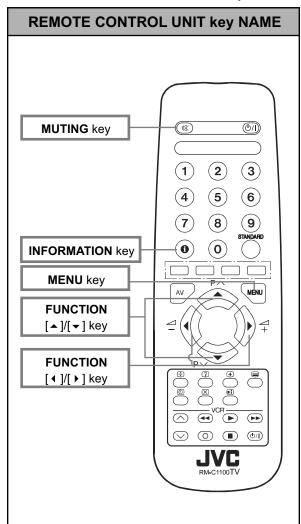
(1) After selecting the correct 8-bit option line, by using the dedicated number on the number key (0,1,2,3,4,5,6,7) you can change that bit from 0 to 1 or vice versa.

Example:

Initially an option with values: "00000000" Press "0" button: "00000001" Press "0" button again: "00000000"

4.1.5 HOW TO STORE OF SETTING VALUE

(1) The setting value will be stored auto matically when release the REMOTE CONTROL UNIT keys.



SECTION 5 TROUBLESHOOTING

Please refer to "AV-20RM4SE, AV-21RM4SE, AV-21RM4SN and AV-21RM4SP (No.YA080)" about this section.





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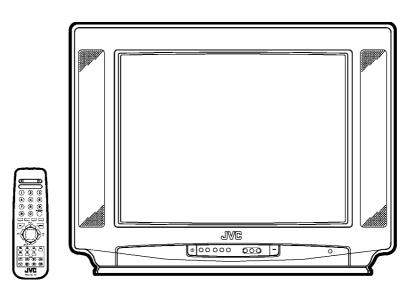
VPT

JVC

SERVICE MANUAL

COLOUR TELEVISION

AV25BT6ENS AV25BT6ENB



CONTENTS

	SPECIFICATIONS · · · · · · · · · · · · · · · · · · ·		
	SAFETY PRECAUTIONS · · · · · · · · · · · · · · · · · · ·		4
	FEATURES·····	• !	5
	MAIN DIFFERENCE LIST · · · · · · · · · · · · · · · · · · ·	. !	5
	SPECIFIC SERVICE INSTRUCTIONS	. (6
	SERVICE ADJUSTMENTS	10	0
	PARTS LIST · · · · · · · · · · · · · · · · · · ·	2	1
*	OPERATING INSTRUCTIONS		
×	STANDARD CIRCUIT DIAGRAM · · · · · · · · · · · · · · · · · · ·	2 -'	1

SPECIFICATIONS

,TF-1		Content		
ITEM		AV-25BT 6EN S (Silver) AV-25BT 6EN B (Black)		
Dimensions (WxHxD)		69 cm x 54 cm x 47 cm		
Weight		27 kg		
TV RF System		B/G		
Colour System TV Mode		PAL		
Colour System	Video Mode	PAL / NTSC 3.58 / NTSC 4.43		
Teletext System		Fastext / Toptext		
Stere o System		German + NICAM		
Tuning System		Frequency Synthesizer Tuning System		
Number Of CH memory pos	ition	100 ch		
	VHF (VL)	46.25MHZ ~ 168.25MHz		
Describing Francisco	VHF (VH)	175.25MHz ~ 463.25MHz		
Receiving Frequency	UHF	471.25MHz ~ 863.25MHz		
	CATV	S01-S41 & S75-S79		
	VIF Carrier	38.9MHz		
Intermediate Frequency		32.4MHz (6.5MHz)		
intermediate rrequency	SIF Carrier	32.9MHz (6.0MHz)		
		33.4MHz (5.5MHz)		
Colour Sub Carrier Frequen	су	PAL (4.43MHz), SECAM (4.43MHz), NTSC (3.58MHz/4.43MHz)		
Aerial Input Terminal		75Ohm Unbalanced		
Power Input		AC 220V ~ 240V, 50Hz		
Power Consumption		135W(Max) 1.8W (stand by)		
Picture Tube		Visible size: 59cm (Measured diagonally)		
High Voltage		30.45kV		
Speaker		5.7 X 16 cm Oval type X 2		
Au dio Output		10W + 10W		
	Video	1Vp-p, 75 Ohm		
Input	S/Video	Y: 1Vp-p Positive C: 0.286Vp-p		
	Au dio (L/R)	500 mV rms, High Impedance		
Output	Video	1 Vp-p, 75 Ohm		
Output	Au dio (L/R)	500 mV rms, Low Impedance		
	Rear Side	AV1 (Video/Audio/RGB)		
Input Terminal	ixeai Side	AV2 (Video/Audio/S-VHS)		
	Front Side	AV3 (Video/Audio)		
	Front Side	Headphone jack (Stereo mini jack 3.5∅)		
Output Terminal	Rear Side	AV1 (Video/Audio)		
	rear Side	AV2 (Video/Audio) (Selected TV, AV1 or AV3)		
Remote Control Unit		VE-30017763 (RM-C1100), Battery size:AA/R06 dry battery x 2		

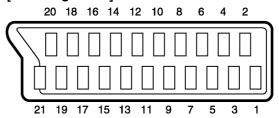
Design & specifications are subject to change without notice.

■21-pin Euro connector (SCART socket): AV1 / AV 2

(P-P= Peak to Peak, S-W= Sync tip to white peak, B-W= Blanking to white peak)

Pin No.	Signal Designation	Matching Value	AV-1	AV-2
1	AUDIO R output	500mVrms(Nominal),Low impedance	O (TV OUT)	O (TV/LINE OUT)
2	AUDIO R input	500mVrms(Nominal),High impedance	0	0
3	AUDIO L output	500mVrms(Nominal),Low impedance	O (TV OUT)	O (TV/LINE OUT)
4	AUDIO GND		0	0
5	GND (B)		0	0
6	AUDIO L input	500mVrms(Nominal), High impedance	0	0
7	B input	700mVB-W, 75Ω	0	NC
8	FUNCTON SW (SLOW SW)	Low: 0-3V, High: 8-12V, High impedance	0	NC
9	GND (G)		0	0
10	-		NC	-
11	G input	700mVB-w, 75Ω	0	NC
12	-		NC	-
13	GND (R)		0	0
14	GND (YS)		0	NC
15	R / C input	R:700mVB-W,75Ω C:300mVP-P,75Ω	O (R/C)	O (only C)
16	Ys input	Low : 0 – 0.4, High : 1 - 3V, 75 Ω	0	NC
17	GND(VIDEO output)		0	0
18	GND(VIDEO input)		0	0
19	VIDEO output	1Vsw (Negative going sync), 75Ω	O (TV)	O (TV/LINE OUT)
20	VIDEO / Y input	1Vs-W (Negative going sync), 75Ω	0	0
21	COMMON GND		0	0

[Pin assignment]



SAFETY PRECAUTIONS

- The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
- Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
- 3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. Electrical components having such features are identified by shading on the schematics and by (Δ) on the parts list in Service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
- Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.

Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE side GND, the ISOLATED(NEUTRAL) side GND and EARTH side GND. Don't short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND at the same time

If above note will not be kept, a fuse or any parts will be broken.

- If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B1 POWER SUPPLY).
- 6. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
- 7. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10 kΩ 2W resistor to the anode button.
- 8. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

9. Isolation Check

(Safety for Electrical Shock Hazard)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock

(1) Dielectric Strength Test

The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC (r.m.s.) for a period of one second.

(.... Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)

This method of test requires a test equipment not generally found in the service trade.

(2) Leakage Current Check

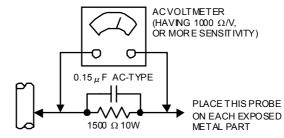
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).

However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

Alternate Check Method

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a $0.15\mu F$ AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).

However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



GOOD EARTH GROUND

FEATURES

- 1. It is a remote controlled color television.
- 2. 100 programs from VHF, UHF bands or cable channels can be preset.
- 3. It can tune cable channels.
- 4. Controlling the TV is very easy by its menu driven system.
- 5. It has two Euroconnector sockets for external device (such as video recorder, video games, audio set, etc.)
- 6. Front AV Input available.
- 7. Stereo sound systems (German + Nicam) are available.
- 8. Full function Teletext (Fastext, Toptext).

- 9. It is possible to connect headphone.
- 10. Direct channel access.
- 11. APS (Automatic Programming System).
- 12. All programs can be named.
- 13. Forward or backward automatic tuning.
- 14. Automatic sound mute when no transmission.
- 15. 5 minutes after the broadcasting (closedown), the TV switches itself automatically to stand-by mode.
- 16. Child Lock.

MAIN DIFFERENCE LIST

Δ	MODEL No. Parts Name	AV-25BT6ENS (Silver)	AV-25BT6ENB (Black)
⚠	POWER BUTTON	VE-20043532	VE-20000903
⚠	FRONT CABINET	VE-20046446	VE-20004131
⚠	FUNCTION BUTTON	VE-20043545	VE-20003730
Δ	REAR COVER	VE-20092523	VE-20101575
	CARTON BOX	VE-50028494	VE-50028507
⚠	RATING LABEL	VE-20102134	VE-20102164

SPECIFIC SERVICE INSTRUCTIONS

DISASSEMBLY PROCEDURE

REMOVING THE REAR COVER

- 1. Remove the 8 screws marked A.
- 2. Remove the 2 screws marked B.
- 3. Withdrawthe rear cover toward you.

REMOVING THE MAIN PWB ASS'Y

- After removing the rear cover.
- 1. You can pull out the MAIN PWB ASS'Y.

REMOVING THE HEADPHONE PWB ASS'Y

- After removing the rear cover.
- 1. Remove the 1 screw marked C.
- 2. Remove the HEADPHONE PWB ASSY & BRACKET.

REMOVING THE SPEAKER

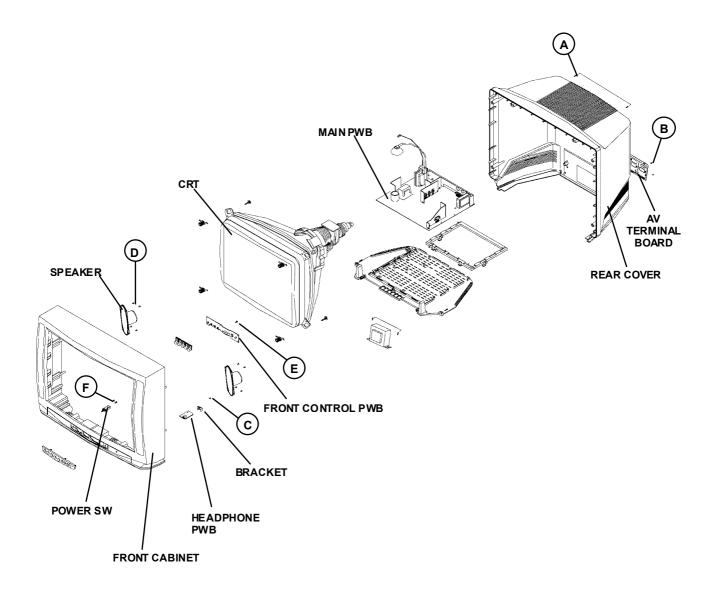
- After removing the rear cover.
- 1. Remove the 4 screws marked D.
- 2. Remove the SPEAKER.

REMOVING THE FRONT CONTROL PWB

- After removing the rear cover.
- Remove the MAIN PW B ASS'Y.
- Remove the 4 screws marked E and remove the FRONT CONTROL PWB.

REMOVING THE POWER SW

- After removing the rear cover.
- Remove the MAIN PW B ASS'Y.
- Remove the 2 screws marked F, and remove the POW ER SW.



REPLACEMENT OF CHIP COMPONENT

■ CAUTIONS

- 1. Avoid heating for more than 3 seconds.
- 2. Do not rub the electrodes and the resist parts of the pattern.
- 3. When removing a chip part, melt the solder adequately.
- 4. Do not reuse a chip part after removing it.

■ SOLDERING IRON

- 1. Use a high insulation soldering iron with a thin pointed end of it.
- 2. A 30 w s oldering iron is recommended for easily removing parts.

■ REPLACEMENT STEPS

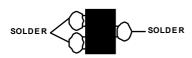
- 1. How to remove Chip parts
 - ♦ Resistors, capacitors, etc.
 - (1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.



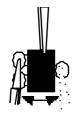
(2) Shift with tweezers and remove the chip part.



- ◆ Transistors, diodes, variable resistors, etc.
- (1) Apply extra solder to each lead.



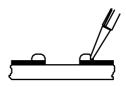
(2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.



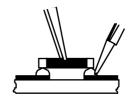
Note: After removing the part, remove remaining solder from the pattern.

2. How to install Chip parts

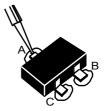
- Resistors, capacitors, etc.
- (1) Apply solder to the pattern as indicated in the figure.



(2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.



- Transistors, diodes, variable resistors, etc.
- (1) Apply solder to the pattern as indicated in the figure.
- (2) Grasp the chip part with tweezers and place it on the solder
- (3) First solder lead **A** as indicated in the figure.



(4) Then solder leads ${f B}$ and ${f C}$.



MEMORY IC REPLACEMENT

1. Memory IC

This model use a memory IC.

This memory IC stores data for proper operation of the video and deflection circuits.

When replacing, be sure to use an IC containing this (initial value) data.

2. Memory IC replacement procedure

(1) Power off

Switch off the power and disconnect the power cord from the wall outlet.

(2) Replace the memory IC

Initial value must be entered into the new IC.

(3) Power on

Connect the power cord to the wall outlet and switch on the power.

(4) SERVICE MENU setting

- Press MENU key and, while the displayed MENU screen, press 4, 7, 2, 5 key on the remote control unit or press MUTING key and INFORMATION key at the simultaneously.
- 2) The SERVICE MENU screen of Fig.1 is displayed.
- Verify what to set in the SERVICE MENU, and set whatever is necessary (Fig.1). Refer to the SERVICE ADJUSTMENT for setting.
- 4) Press the STANDARD key to exit SERVICE MENU.

(5) Receive channel setting

Refer to the OPERATING INSTRUCTIONS (USER'S GUIDE) and set the receive channels (Channels Preset) as described

(6) User settings

Check the user setting items according to after page. Where these do not agree, refer to the OPERATING INSTRUCTIONS (USER'S GUIDE) and set the items as described.

SERVICE MENU

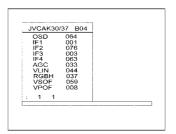


Fig.1

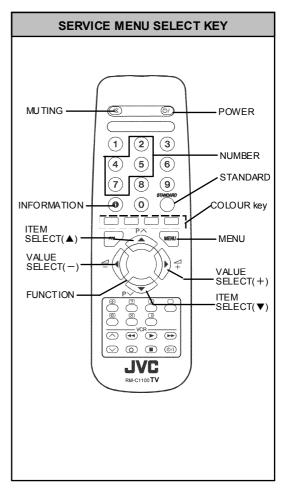


Fig.2

SETTING OF THE LAST MEMORY FOR SHIPMENT

■ USER SETTING VALUES

Setting Item Setting Value		Setting Item Setting Value			
SOUNI) MENU	FEATURE MENU			
BALANCE	CENTER	SLEEP TIMER	OFF		
BASS	1	CHILD LOCK	OFF		
TREBLE	1	LANG UAGE	ENGLISH		
MO DE	STEREO	AV-2 OUTPUT TV			
EFFECT	OFF				
PICTUR	E MENU	INSTALL			
BRIGHTNESS	These adjust are automatically	PROGRAMME			
CONTRAST	restored when APS bit in Service	BAND			
COLOUR	menu is set.	CHANNEL	Refer to the INSTRUCTION		
SHARPNESS	The procedure for setting APS	SEARCH	воок		
HUE (only NTSC)	bit is described bellow.	FINE TUNING			
PICTURE MODE	AUTO	STORE			

■ SETTING APS BIT IN SERVICE MENU

- 1) Enter service menu in TV mode by pressing "INFORMATION" and "MUTING" keys simultaneously. Service Menu will appear.
- 2) Select TX1 (TELETEXT OPTION) by pressing Up/Down keys on remote control unit.
- 3) Press the 7 key on remote control unit to set APS bit. (After this, bit 7 of TX1 will be "1")
- 4) Press STANDARD key on remote control unit to exit service mode.

 NOTE: DO NOT TURN OFF THE TV BY USING POWER BUTTON ON THE FRONT PANEL.

SERVICE ADJUSTMENTS

ADJUSTMENT PREPARATION:

- You can make the necessary adjustments for this unit with either the Remote Control Unit or With the adjustment tools and parts as given below.
- Adjustment with the Remote Control Unit is made on the basis of the initial setting values, however, the new setting values which set the screen to its optimum condition may differ from the initial settings.
- 3. Make sure that AC power is turned on correctly.
- 4. Turn on the power for set and test equipment before use, and start the adjustment procedures after waiting at least 30 minutes.
- Unless otherwise specified, prepare the most suitable reception or input signal for adjustment.

ADJUSTMENT EQUIPMENT

- 1. DC voltmeter (or digital voltmeter)
- 2. Signal generator (Pattern generator) [PAL/SECAM/NTSC]
- 3. Remote control unit

- Never touch any adjustment parts which are not specified in the list for this adjustment - variable resistors, transformers, condensers, etc.
- 7. Presetting before adjustment.

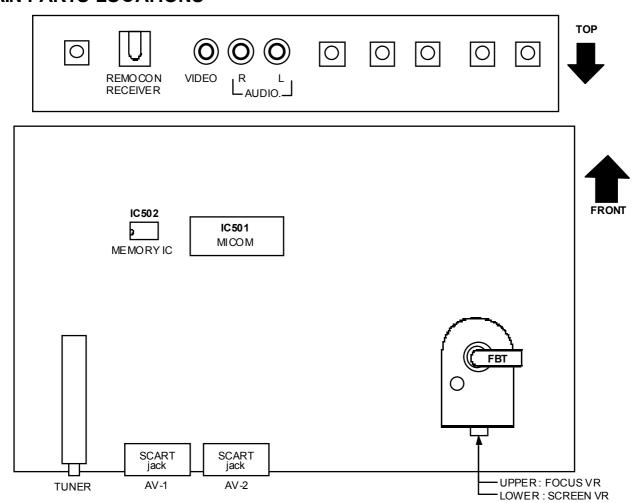
Unless otherwise specified in the adjustment instructions, preset the following functions with the remote control unit:

BRIGHTNESS	
CONTRAST	CENTER
COLOUR	OLIVILIX
SHARPNESS	

ADJUSTMENT ITEM

- SCREEN ADJUSTMENT
- OSD HORIZONTAL POSITION ADJUSTMENT
- IF ADJUSTMENT
- AGC AUTOMATICALLY ADJUSTMENT
- DEFLECTION CIRCUIT ADJUSTMENT
- GEOMETRY MENU ADJUSTMENT
- WHITE BALANCE ADJUSTMENT

MAIN PARTS LOCATIONS



BASIC OPERATION SERVICE MENU

■ HOW TO ENTER THE SERVICE MENU

- 1) Press the MENU key.
- 2) MENU screen of fig.1 will be displayed

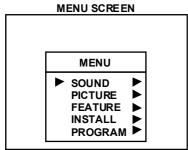
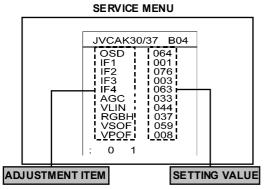


Fig.1

- While the MENU screen is displayed, press the 4,7,2,5 key or INFORMATION key and MUTING key simultaneously.
- 4) The SERVICE MENU screen of (Fig.2) will be displayed.



Fia.2

■ SELECTION OF ADJUSTMENT ITEMS

- 1) Enter the SERVICE MENU
- Press the FUNCTION ▲/▼ key and select the ADJUSTMENT

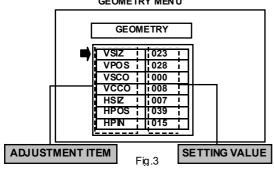
 ITFM
- 3) Press the FUNCTION ◀ / ▶ key and set the SETTING VALUE.

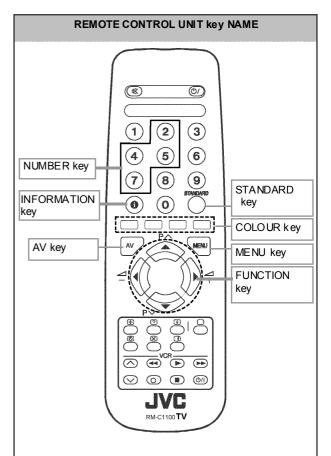
■ HOW TO EXIT SERVICE MODE

1) Press the **STANDARD** Key on REMOTE CONTROL UNIT.

■ HOW TO ENTER THE GEOMETRY MENU

- This model is built-in GEOMETRY MENU for geometry adjustment.
- 1) Enter the SERVICE MENU
- 2) Press the GREEN key, geometry menu appears (Fig. 3).
- Press the FUNCTION ▲/▼ key and select the ADJUSTMENT ITEM.
- 4) Press the FUNCTION ◀/▶ key and set the SETTING VALUE. GEOMETRY MENU





FUNCTION OF COLOUR key

RED key:

It switches the AVL to ON or OFF mode on service menu. AVL word is visible on service menu when AVL is on.

GREEN key:

It switches to GEOMETRY adjust menu. Geometry of the picture is adjusted in this menu.

YELLOW key:

It switches to VERTICAL SCAN DISABLE mode. It is us eful to adjust screen voltage.

BLUE key:

It is used to adjust AGC and IF automatically on service menu.

■ ADJUSTMENT ITEM & INITIAL (Recommended) SETTING VALUE in the SERVICE MENU

1/2

ADJUSTMENT ITEM	DESCRIPTION	INITIAL VALUE
OSD	HORIZONTAL POSITION OF OSD	082
IF1	IF COARSE ADJUSTMENT	004
IF2	IF FINE ADJUSTMENT	065
IF3	IF COARSE ADJUSTMENT FOR L-PRIME	004
IF4	IF FINE ADJUSTMENT FOR L-PRIME	065
AGC	AUTOMATIC GAIN CONTROL	Automatically
VLIN	VERTICALLINEARITY	Not used
RGBH	RGB MODE HORIZONTAL SHIFT OFFSET	007
VSOF	VERTICAL SIZE OFFSET for 60Hz	-01
VPOF	VERTICAL POSITION OFFSET for 60Hz	-01
HSOF	HORIZONTAL SIZE OFFSET for 60Hz	+00
HPOF	HORIZONTAL POSITION OFFSET for 60Hz	+00
HTOF	HORIZONTAL TRAPEZOID OFFSET for 60 Hz	+01
WR	WHITE POINT ADJUSTMENT FOR RED	040
WG	WHITE POINT ADJUSTMENT FOR GREEN	040
WB	WHITE POINT ADJUSTMENT FOR BLUE	040
BR	BIAS FOR RED	030
BG	BIAS FOR GREEN	031
APR	AUTOMATIC RGB PEAK REGULATION THRESHOLD	010
BRI	BRIGHTNESS	030
CON	CONTRAST	035
COL	COLOUR	038
SHR	SHARP	006
HUE	HUE	031
VOL	VOLUME	015
WR-R	WHITE POINT ADJUSTMENT for RED (RGBmode)	030
WG-R	WHITE POINT ADJUSTMENT for GREEN (RGBmode)	055
WB-R	WHITE POINT ADJUSTMENT for BLUE (RGBmode)	032
FMP1	FM PRESCALER WHEN AVL IS OFF	Not used
NIP1	NICAM PRESCALER WHEN AVL IS OFF	Not used
SCP1	SCART PRESCALER WHEN AVL IS OFF	Not used
SEC1	SECAM PRESCALER WHEN AVL IS OFF	Not used
FMP2	FM PRESCALER WHEN AVL IS ON	013
NIP2	NICAM PRESCALER WHEN AVL IS ON	016
SCP2	SCART PRESCALER WHEN AVL IS ON	013
SEC2	SECAM PRESCALER WHEN AVL IS ON	Not used
F1H	HIGH BYTE OF VHF1-VHF3 CROSS-OVER FREQUENCY	00001001
F1L	LOW BYTE OF VHF1-VHF3 CROSS-OVER FREQUENCY	10010010
F2H	HIGH BYTE OF VHF3-UHF CROSS-OVER FREQUENCY	00011011
F2L	LOW BYTE OF VHF3-UHF CROSS-OVER FREQUENCY	10000010
BS1	BAND SWITCHING BYTE FOR VHF1	00000011
BS2	BAND SWITCHING BYTE FOR VHF3	00000110
BS3	BAND SWITCHING BYTE FOR UHF	10000110
CB	CONTROL BYTE	10000101
OP1	PERIPHERAL OPTIONS	01110101

■ ADJUSTMENT ITEM & INITIAL (Recommended) SETTING VALUE in the SERVICE MENU 2/2

ADJUSTMENT ITEM	DESCRIPTION	INITIAL VALUE
OP2	RECEPTION STANDARD OPTIONS	00001001
OP3	VIDEO OPTIONS	01 10 11 01
OP4	TV FEATURES	10001000
OP5	CHANNEL TABLES	00 00 00 00
TX1	TELETEXT OPTIONS	10010101
GEOM	GEOMETRY OPTIONS	00 00 00 00
OP8	PIP PRESET CHANGE	00 00 00 00

• [GEOMETRY MENU]

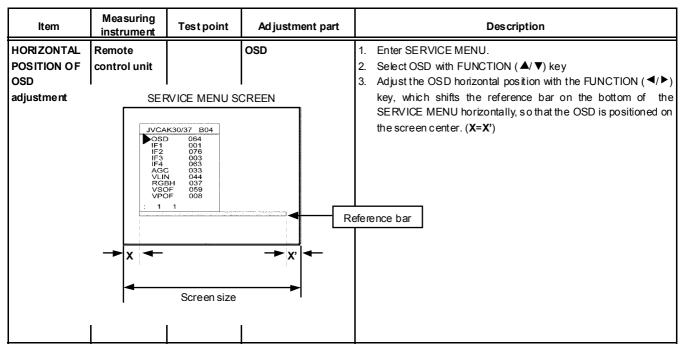
ADJUSTMENT ITEM	DESCRIPTION	INITIAL VALUE
VSIZ	VERTICAL SIZE for 50Hz	030
VPOS	VERTICAL POSITION for 50Hz	010
CSCO	VERTICAL S-CORRECTION for 50Hz	Not used
VCCO	VERTICAL CORNER CORRECTION for 50Hz	Not used
HSIZ	HORIZONTAL SIZE for 50Hz	Not used
HPOS	HORIZONTAL POSITION for 50Hz	035
HPIN	HORIZONTAL PINCUSHION for 50Hz	Not used
HCCO	HORIZONTAL CORNER CORRECTION for 50 Hz	Not used
HTRP	HORIZONTAL TRAPEZOID for 50Hz	Not used
VZSZ	VERTICAL ZOOM SIZE for 50Hz	Not used

ADJUSTMENTS

■ SCREEN ADJUSTMENT

Item	Measuring instrument	Test point	Ad justment part	Description
SCREEN adjustment	Remote control unit		SCREEN VR [On the FBT]	 Enter SERVICE MENU. Press YELLOW key to disable vertical scan. Adjust SCREEN VR. on the FBT as thin as possible. Press YELLOW key again to enable vertical scan. Press STANDARD key to leave service menu.
		→		O—FOCUS VR O—SCREEN VR FBT

■ OSD HORIZONTAL POSITION ADJUSTMENT



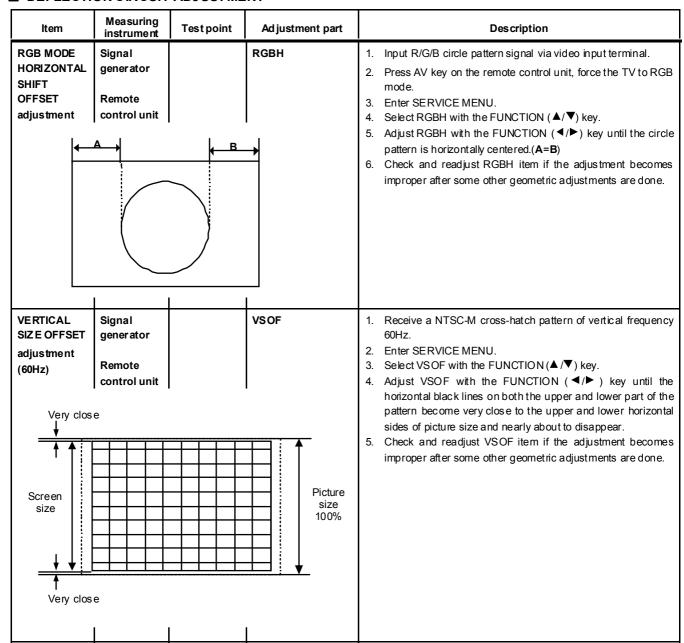
■ IF ADJUSTMENT

Mana	Measuring	Took waint	Adiostocant mant	Pagaristica.
Item	instrument	Test point	Ad justment part	Description
IF adjustment	Remote		IF 1	Receive a PAL colour bar pattern.
	control unit		IF 2	2. Enter SERVICE MENU.
			IF 3	3. Select IF 1 with FUNCTION (♠/▼) key
			IF 4	4. Press BLUE key during IF 1 is highlighted, IF 1 and IF 2 values are adjusted automatically by software.
				 If the standard is L-prime, IF 3 and IF 4 values are adjustment automatically when BLUE key is pressed during IF 1 is highlighted.

■ AGC AUTOMATICALLY ADJUSTMENT

Item	Measuring instrument	Test point	Ad jus	stment part	Description					
AG C AUTOMATIC- AL LY adjustment & check	Remote control unit SERVICE M JVCAK30/37 E OSD 064 IF1 006 IF1 006 IF1 006 IF1 063 AGC 033	ENU SCREEN	AGC			 Enter SERVICE MENU. Receive a 60dB μ V RF signal level. Select AGC with the FUNCTION (▲/▼) key. Press BLUE key on the remote control unit. Then the adjustment will be done automatically by software. See the AGC indicator on SERVICE MENU, it must be "1". Check that picture is normal at 90dB μ V signal level. 				
	VLIN 044 RGBH 037 VSOF 059 VPOF 008			: IF INDICAT	OR	1 AGC INDICATOR	1 NONE			

■ DEFLECTION CIRCUIT ADJUSTMENT



Item	Measuring instruments	Test point	Ad justment part	Description
VERTICAL POSITION OFFSET Adjustment (60Hz)	Signal generator Remote control unit		VPOF	 Receive a NTSC-M circle pattern of vertical frequency 60Hz. Enter SERVICE MENU. Select VPOF with the FUNCTION (▲/▼) key. Adjust VPOF with the FUNCTION (◀/▶) key until the picture is vertically centered.(C=D) Check and readjust vertical position item if the adjustment becomes improper after some other geometric adjustments are done.
HORIZONTAL POSITION OFFSET adjustment (60Hz)	Signal generator Remote control unit	F	НРОБ	 Receive a NTSC-M circle pattern signal of vertical frequency 60Hz. Enter SERVICE MENU. Select HPOF with the FUNCTION (▲/▼) key. Adjust HPOF with the FUNCTION (◄/►) key until the circle pattern is horizontally centered.(E=F) Check and readjust a horizontal position item if the adjustment becomes improper after some other geometric adjustments are done.
HORIZONTAL TRAPEZOID OFFSET adjustment (60Hz) Screen Vertical Center	Signal generator Remote control unit	Pallalel	HT OF	 Receive a NTSC-M cross-hatch pattern signal of vertical frequency 60Hz. Enter SERVICE MENU. Select HTOF with the FUNCTION (▲/▼) key. Adjust HTOF with the FUNCTION (◀ ►) key until both lengths of the upper side and lower side of the closs-hatch pattern become equal. Check and readjust HTOF item if the adjustment becomes improper after some other geometric adjustments are done.

■ GEOMETRY MENU ADJUSTMENT

Item	Measuring instruments	Test point	Ad justment part	Description
VERTICAL SIZ E adjustment (50Hz) Very clo	Signal generator Remote control unit		Picture size 100%	 Receive a PAL B/G cross-hatch pattern of vertical frequency 50Hz. Enter SERVICE MENU. Press the GREEN then enter the GEOMETRY MENU. Select VSIZ (Vertical size) with the FUNCTION (▲/▼) key. Adjust VSIZ with the FUNCTION (◄/►) key until the horizontal black lines on both the upper and lower part of the pattern become very close to the upper and lower horizontal sides of picture size and nearly about to dis appear. Check and readjust VSIZ item if the adjustment becomes improper after some other geometric adjustments are done.
VERTICAL POSITION adjustment (50Hz)	Signal generator Remote control unit		VPOS	 Receive a PAL B/G circle pattern signal of vertical frequency 50Hz. Enter GEOMETRY MENU. Select VPOS (Vertical position) with the FUNCTION (▲/▼) key. Adjust VPOS with the FUNCTION (◄/►) key until the circle pattern is vertically centered.(A=B) Check and readjust VPOS item if the adjustment becomes improper after some other geometric adjustments are done.
VERTICAL S-CORREC- TION adjustment (50Hz)	Signal generator Remote control unit		vsco	 Receive a PAL B/G cross-hatch pattern signal of vertical frequency 50Hz. Enter GEOMETRY MENU. Select VSCO (Vertical s-correction) with the FUNCTION (▲/▼) key. Adjust VSCO with the FUNCTION (◄/▶) key until the vertical length of the center squarer of the cross-hatch pattern becomes equal to upper and lower part squares of the cross-hatch pattern. Check and readjust VSCO item if the adjustment becomes improper after some other geometric adjustments are done.

ltem	Measuring instrument	Test point	Ad justment part	Description
VERTICAL CORNER CORRECTION adjustment (50Hz)	Signal generator Remote control unit		vcco	 Receive a PAL B/G cross-hatch pattern signal of vertical frequency 50Hz. Enter GEOMETRY MENU. Select VCCO (Vertical s-correction) with the FUNCTION (▲/▼) key. Adjust VCCO with the FUNCTION (◄ ►) key until the vertical length of the upper and lower part squares of the cross-hatch pattern become equal to each other. Check and readjust VCCO item if the adjustment becomes improper after some other geometric adjustments are done.
HORIZONTAL SIZ E adjustment (50Hz)	Signal generator Remote control unit		HSIZ	 Receive a PAL B/G cross-hatch pattern signal of vertical frequency 50Hz. Enter GEOMETRY MENU. Select HISZ (Horizontal size) with the FUNCTION (▲/▼) key. Adjust HISZ with the FUNCTION (◀ ▶) key until the vertical black lines on both the left and right part of the cross-hatch pattern become very close to the left and right horizontal sides of picture tube and nearly about to disappear.
Ve		e size 100%	Very close	
HORIZONTAL POSITION adjustment (50Hz)	Signal generator Remote control unit		HPOS	 Receive a PAL B/G circle pattern signal of vertical frequency 50Hz. Enter GEOMETRY MENU. Select HPOS with the FUNCTION (▲/▼) key. Adjust HPOS with the FUNCTION (▼ ►) key until the circle pattern is horizontally centered.(C=D) Check and readjust HPOS item if the adjustment becomes improper after some other geometric adjustments are done.

ltem	Measuring instrument	Test point	Ad justment part	Description
HORIZONTAL PINCUSHION adjustment (50Hz)	Signal generator Remote control unit		HPIN	 Receive a PAL B/G cross-hatch pattern signal of vertical frequency 50Hz. Enter GEOMETRY MENU. Select HPIN(Horizontal pincushion) with the FUNCTION (▲/▼) key. Adjust HPIN with the FUNCTION (◄/▶) key until the bending of the vertical line of the cross-hatch pattern are corrected. Check and readjust HPIN item if the adjustment becomes improper after some other geometric adjustments are done.
HORIZONTAL CORNER CORRECTION adjustment (50Hz)	Signal generator Remote control unit		нссо	 Receive a PAL B/G cross-hatch pattern signal of vertical frequency 50Hz. Enter GEOMETRY MENU. Select HCCO (Horizontal corner correction) with the FUNCTION (▲/▼) key. Adjust HCCO with the FUNCTION (◄/▶) key until the bending of the vertical line of the cross-hatch pattern are corrected. Check and readjust HCCO item if the adjustment becomes improper after some other geometric adjustments are done.
HORIZONTAL TRAPEZOID adjustment (50Hz)	cal → 	A	HT RP	 Receive a PAL B/G cross-hatch pattern signal of vertical frequency 50Hz. Enter GEOMETRY MENU. Select HTRP (Horizontal trapezoid) with the FUNCTION (▲/▼) key. Adjust HTRP with the FUNCTION (◄/►) key until both lengths of the upper side and lower side of the cross-hatch pattern become equal.(A=B) Check and readjust HTRP item if the adjustment becomes improper after some other geometric adjustments are done.

■ WHITE BALANCE ADJUSTMENT

Item	Measuring instrument	Test point	Ad justment	part	Description					
WHITE BALANCE adjustment (Low light)	Signal generator Remote control unit		WR WG WB		 Receive a black & white signal (colour off). Enter SERVICE MENU. Select WR / WG / WB with the (▲/▼) key, respectively. Adjust WR / WG / WB with the FUNCTION (◄/▶) key respectively, until the white part turns to pure white without a other color 					N (◀/▶) key,
			Item	,	WR	,	WG	WB		
		Recom	mended value	(030		030	030		
WHITE BALANCE adjustment (High light)	Signal generator Remote control unit	BR BG			 Enter Select Adjust 	SERVIC t BR / B(t BR / E	CEMENU. Gwith the F BGwith the	signal (colour of FUNCTION (A FUNCTION (een make white	/ ▼) ke	key respectively
			Item		BR			BG		
		Recom	mended value		028		(029		

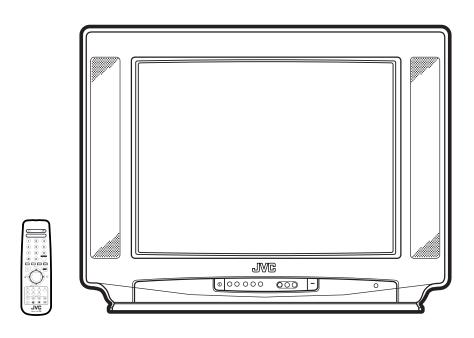
JVC

SCHEMATIC DIAGRAMS

COLOUR TELEVISION

AV-25BT6ENS AV-25BT6ENB

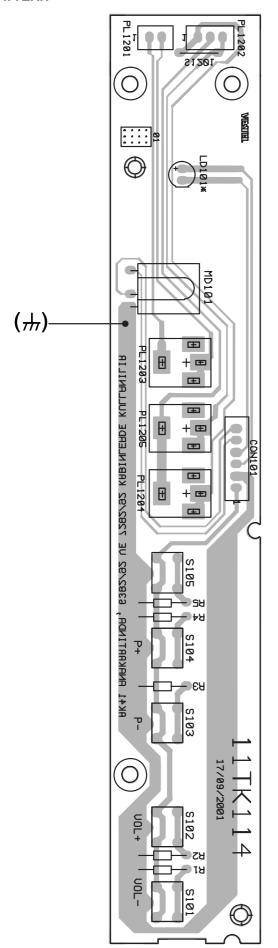
CD-ROM No.SML200207



CONTENTS

NOTE ON USING CIRCUIT DIAGRAMS	2-1
SEMICONDUCTOR SHAPES ·····	2-2
BLOCK DIAGRAM ·····	2-3
CIRCUIT DIAGRAMS ·····	2-5
PATTERN DIAGRAMS	2-2

FRONT CONTROL PWB PATTERN





AV-25BT6ENS, AV-25BT6ENB STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the ∆symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1)Input signal : Colour bar signal

(2) Setting positions of each knob/button and

: Original setting position variable resistor

when shipped

(3)Internal resistance of tester :DC 20k Ω /V

(4)Oscilloscope sweeping time \Rightarrow 20µS/div

> :V ⇒ 5mS/div

:Others ⇒ Sweeping time is

specified

(5) Voltage values :All DC voltage values

* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATIONS ON THE CIRCUIT DIAGRAM (1)Resistors

Resistance value

No unit $[\Omega]$ Κ :[K Ω] M :[M Ω]:

Type

No indication :Carbon resistor OMR :Oxide metal film resistor MFR :Metal film resistor MPR :Metal plate resistor UNFR :Uninflammable resistor FR :Fusible resistor

* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

Capacitance value

1 or higher :[pF] less than 1 :[µF] Withstand voltage

No indication :DC50[V]

Others :DC withstand voltage [V] AC indicated :AC withstand voltage [V]

* Electrolytic Capacitors

47/50[Example]:Capacitance value [µF]/withstand voltage[V]

Type

No indication :Ceramic capacitor MM :Metalized mylar capacitor PP :Polypropylene capacitor

MPP :Metalized polypropylene capacitor

MF :Metalized film capacitor TF :Thin film capacitor BP :Bipolar electrolytic capacitor

TAN :Tantalum capacitor

(3)Coils

[H4]: No unit

:As specified Others

4.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE side GND and the ISOLATED(NEUTRAL) side GND. Therefore, care must be taken for the following points.

- (1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.
- (2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.
- ♦ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

♦ Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.

When ordering parts, please use the numbers that appear in the Parts List.

Jul. 2002 No. 52056 2-24 No.52056 DP6060

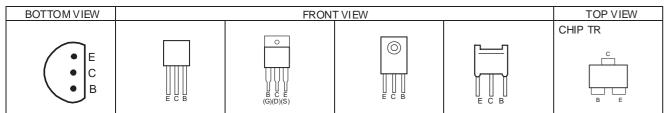
CRT SOCKET PWB PATTERN

CONTENTS

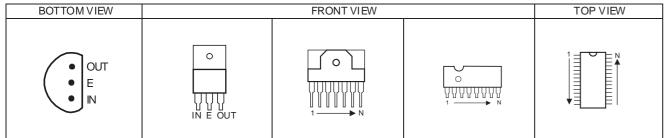
SEMICONDUCTOR SHAPES	2-2
BLOCK DIAGRAM	2-3
CIRCUIT DIAGRAMS	
MAIN PWB CIRCUIT DIAGRAM	2-5
CRT SOCKET PWB CIRCUIT DIAGRAM	2-17
HEADPHONE PWB CIRCUIT DIAGRAM	2-19
FRONT CONTROL PWB CIRCUIT DIAGRAM	2-20
PATTERN DIAGRAMS	
MAIN PWB PATTERN	2-21
CRT SOCKET PWB PATTERN	2-23
HEADPHONE PWB PATTERN	2-23
FRONT CONTROL PWB PATTERN	2-24

SEMICONDUCTOR SHAPES

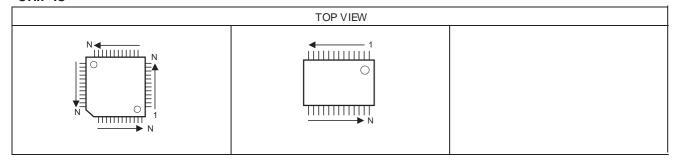
TRANSISTOR

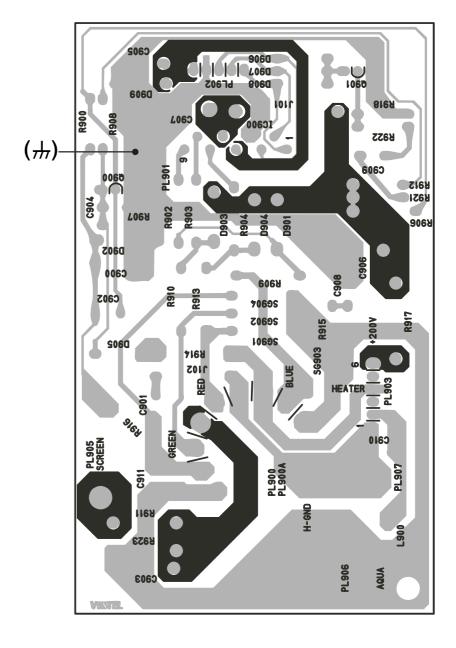




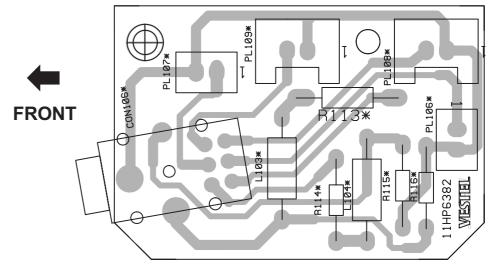


CHIP IC





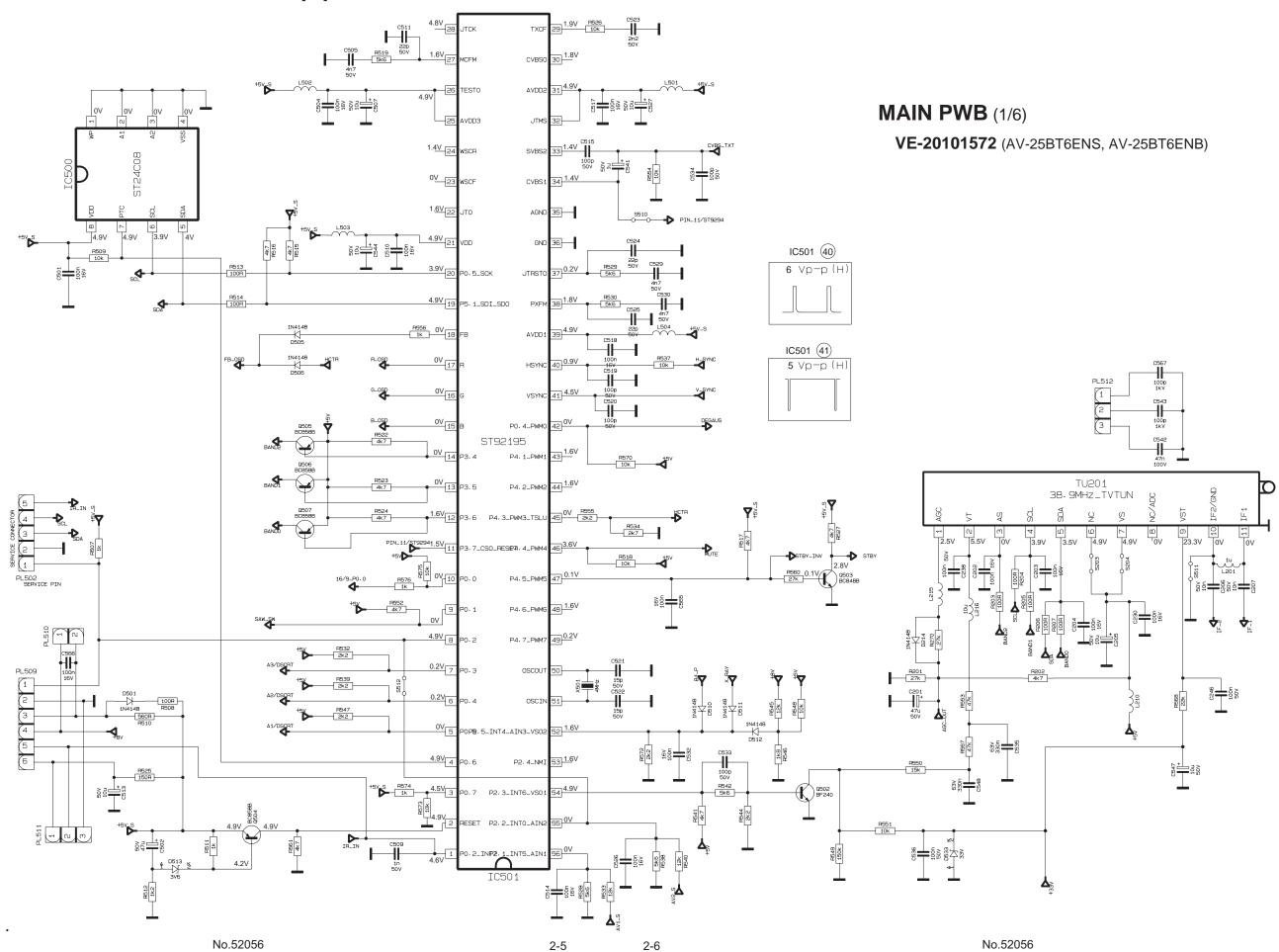
HEADPHONE PWB PATTERN





SCART2

CIRCUIT DIAGRAMS MAIN PWB CIRCUIT DIAGRAM [1/6]



MAIN PWB (2/6)

+14V_A

4 6 7 1

VE-20101572 (AV-25BT6ENS, AV-25BT6ENB)

IC301

TDA7269A

-15.6V

-**11**-

10A

C368 47n 50V

4H7 R320

PL301

1 0 E 4 0 0

IC403 (31)

4 Vp-p(H)

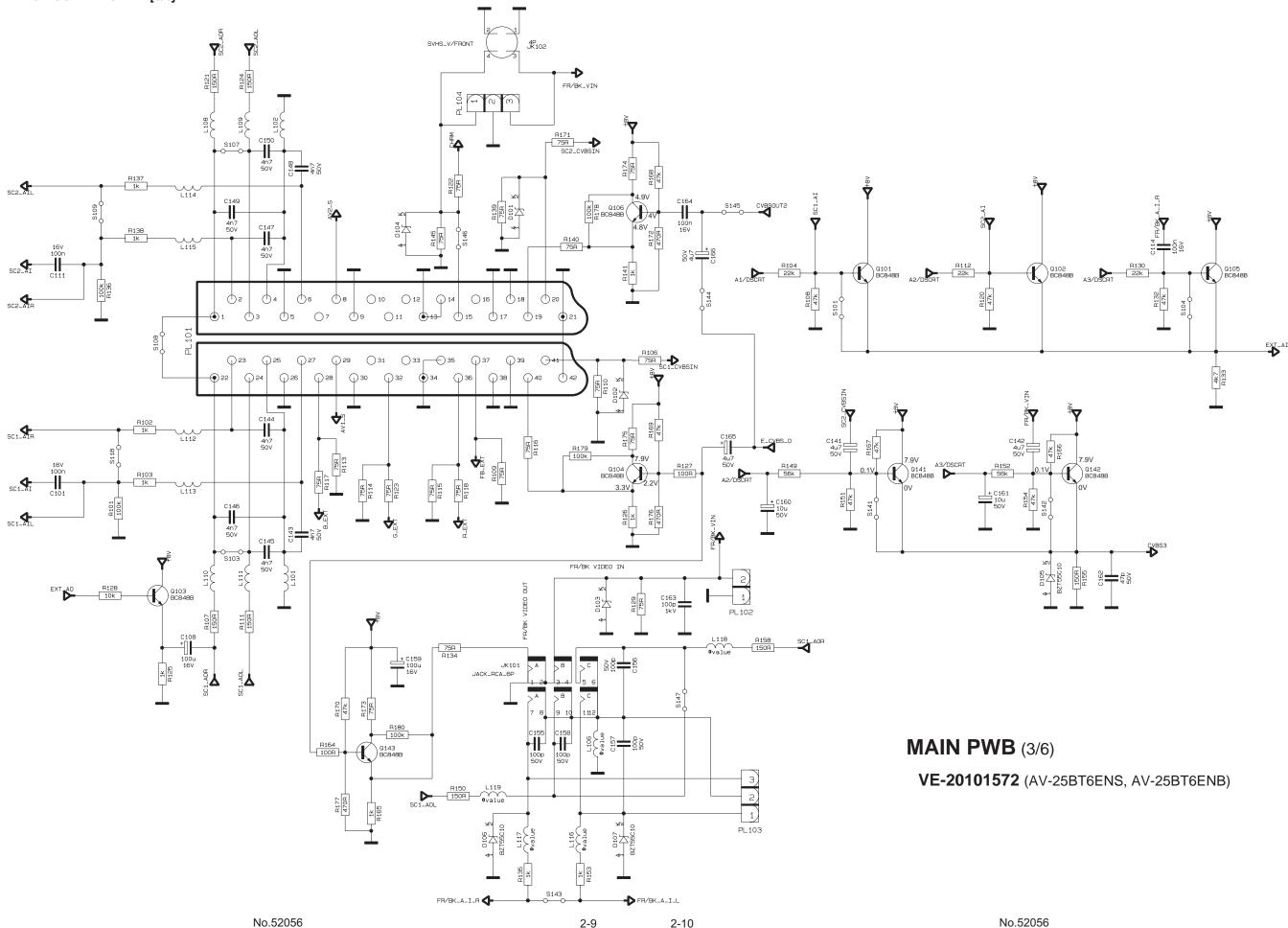
IC403 (32)

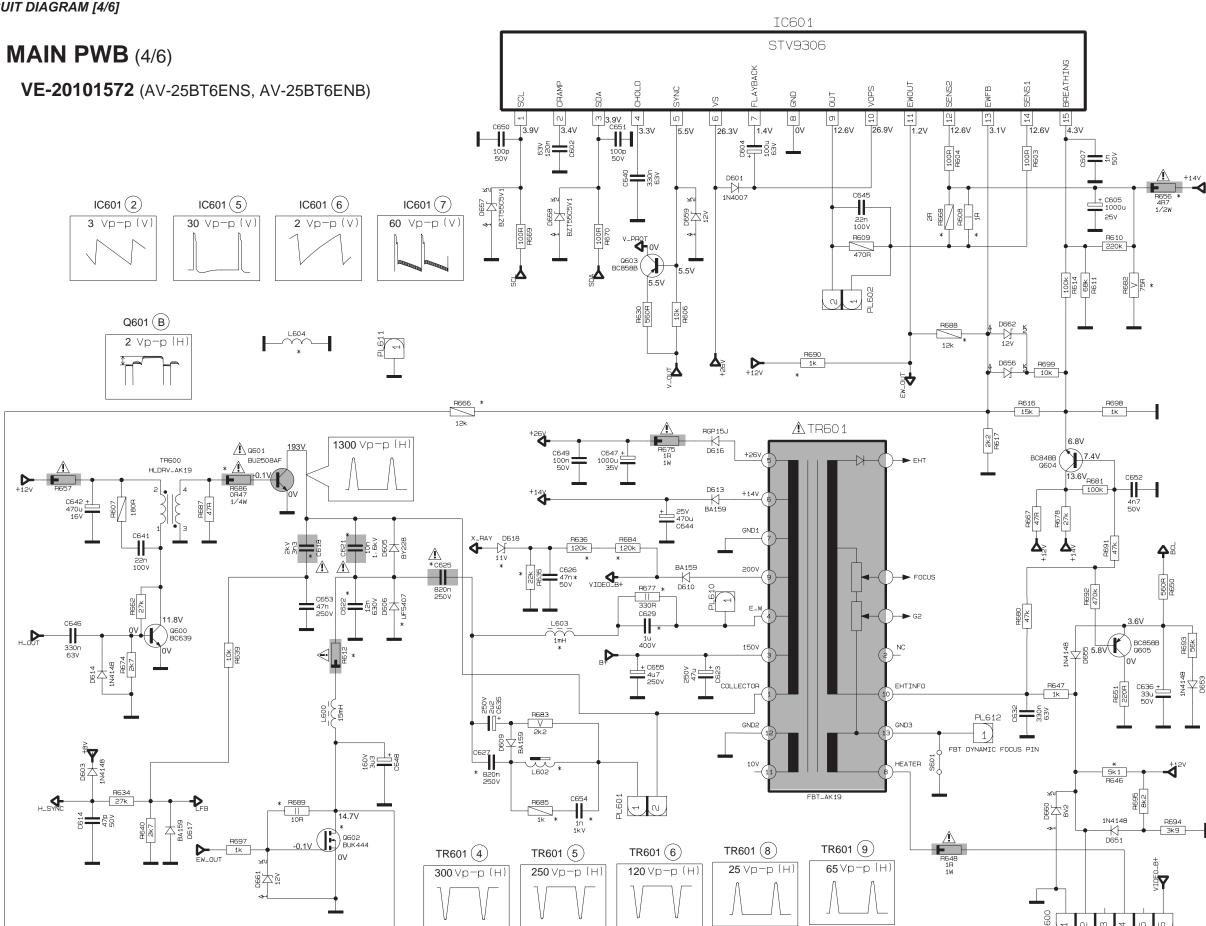
3.5 Vp-p (H

IC403 (30)

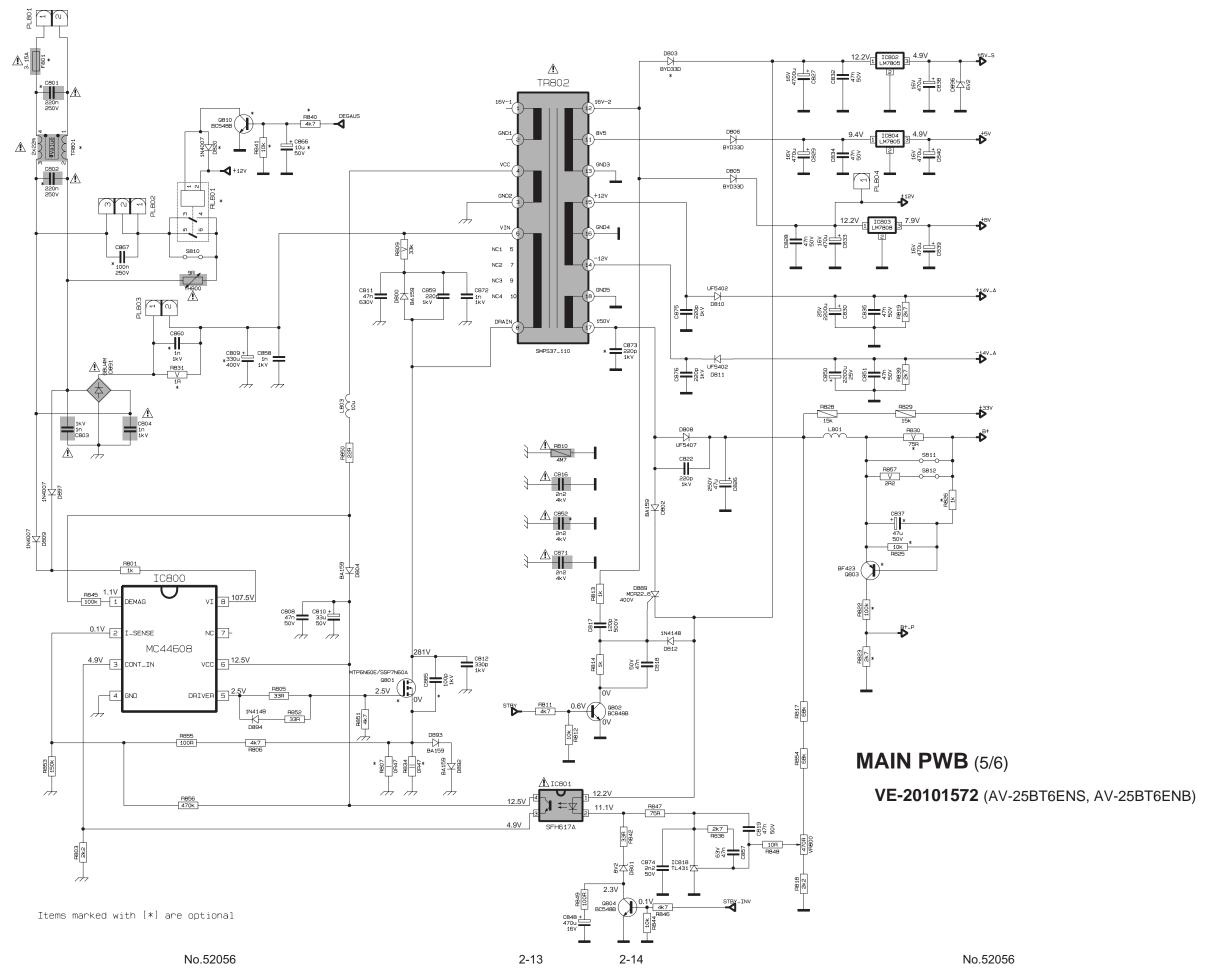
4 Vp-p (H)

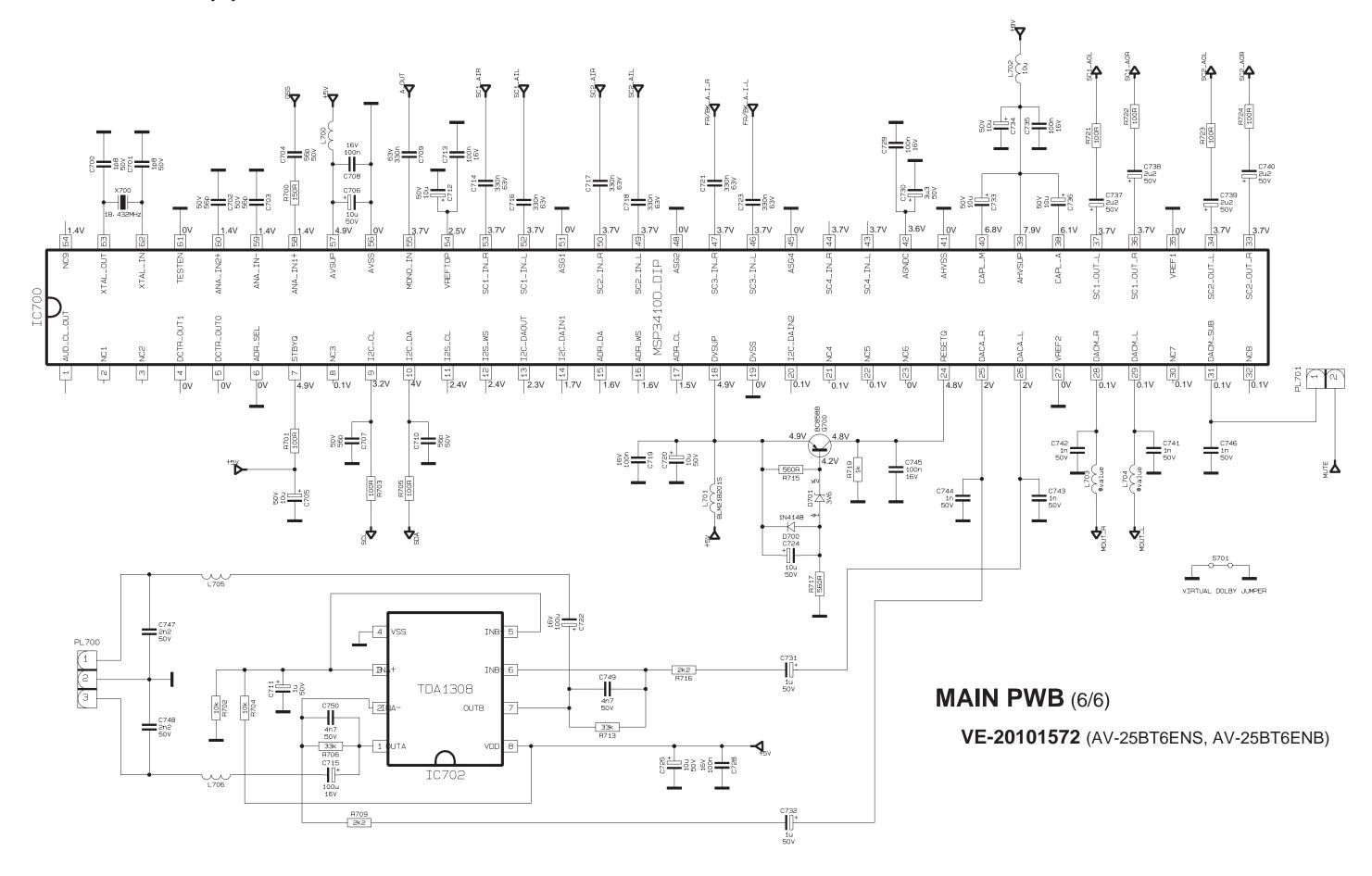
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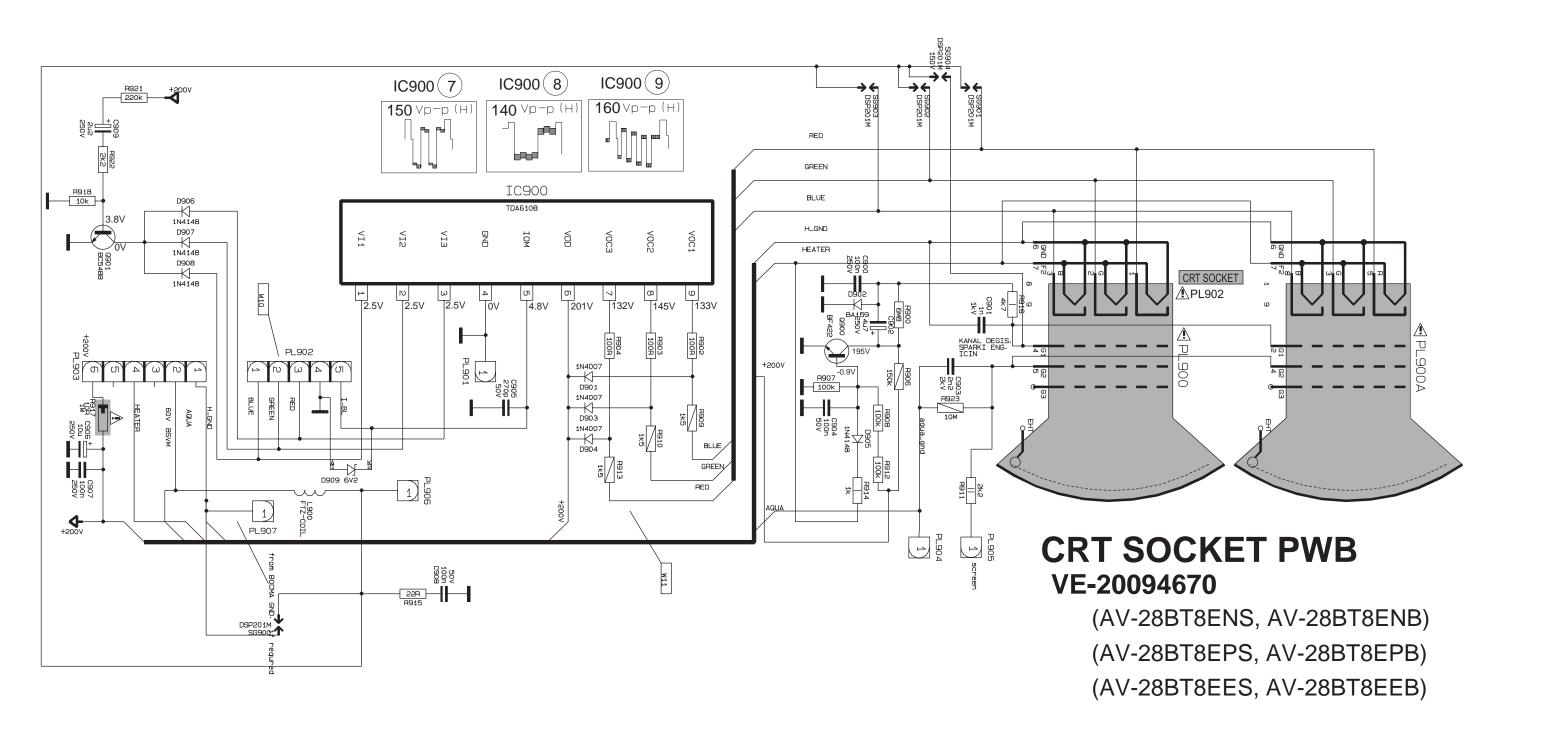




MAIN PWB CIRCUIT DIAGRAM [5/6]

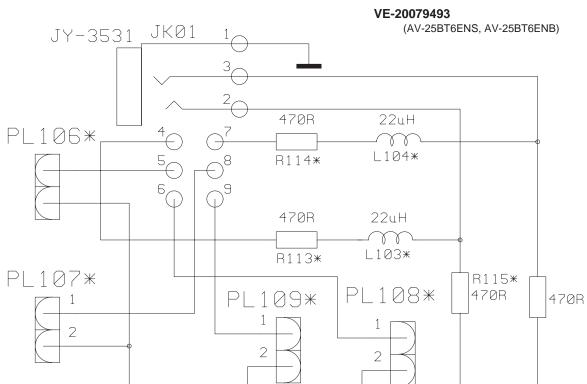




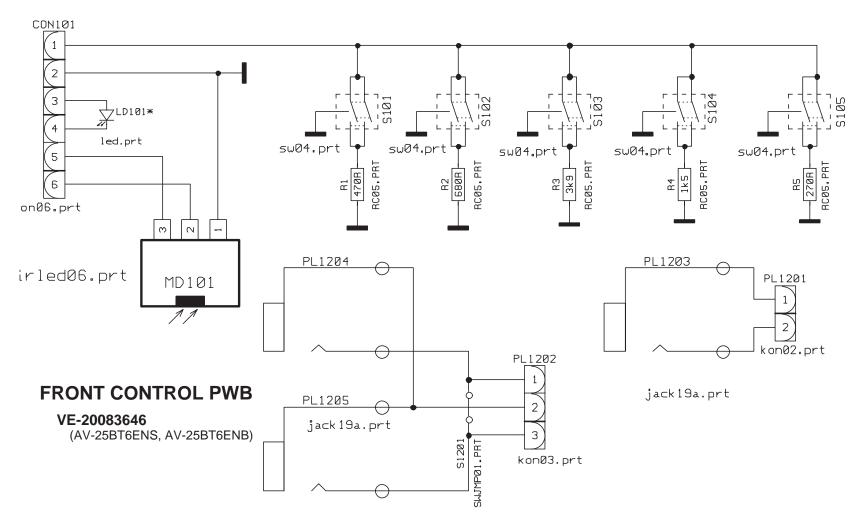


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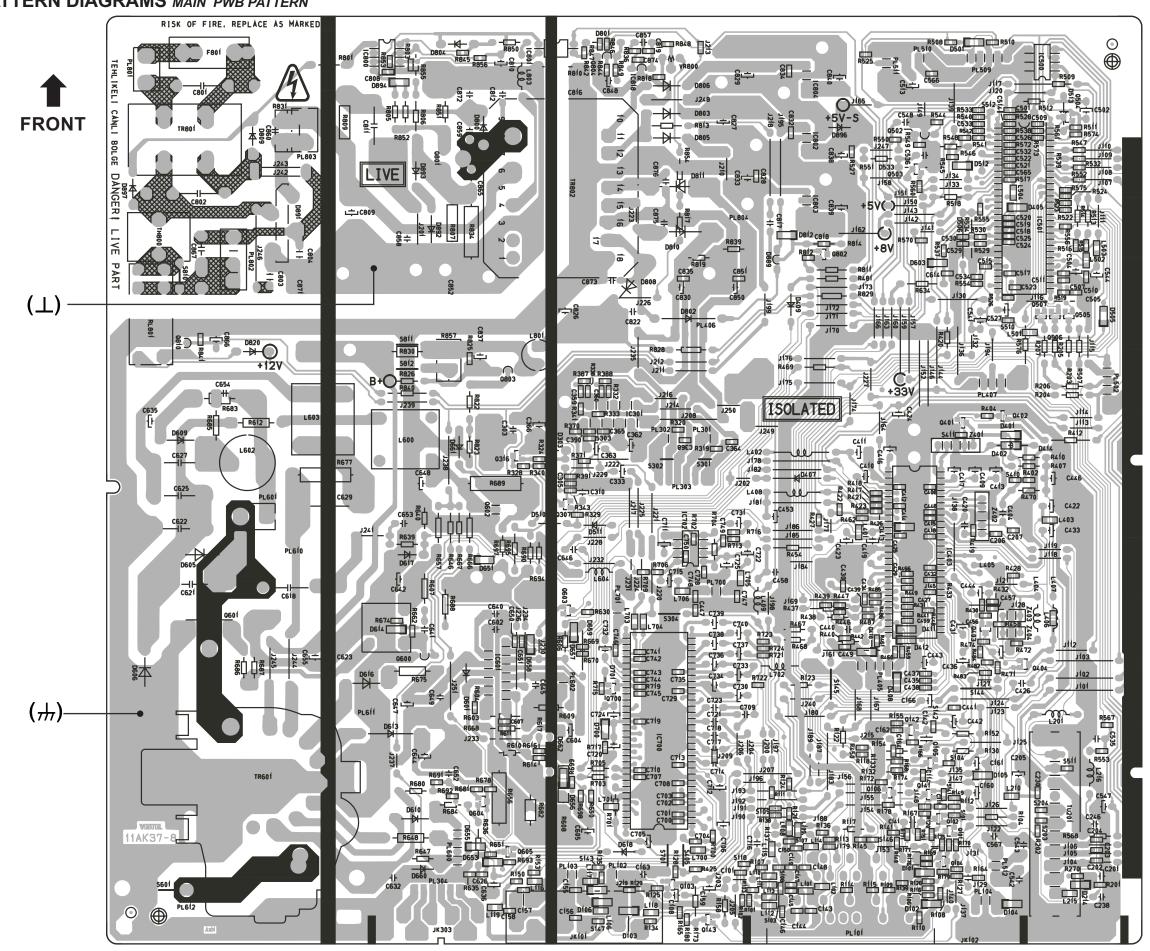
HEADPHONE PWB



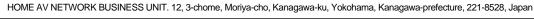
FRONT CONTROL PWB CIRCUIT DIAGRAM



PATTERN DIAGRAMS MAIN PWB PATTERN









PARTS LIST

CONTENTS

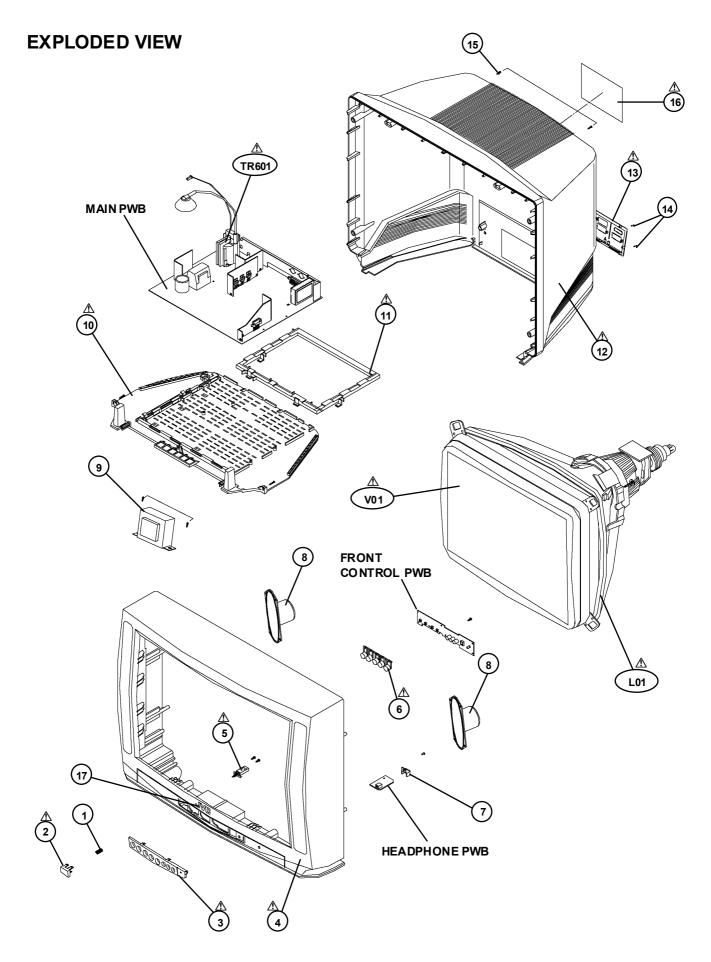
	■ USING PW BOARD & REMOTE CONTROL UNIT ······	21
	■ EXPLODED VIEW PARTS LIST······	22
	■ EXPLODED VIEW ······	23
	PRINTED WIRING BOARD PARTS LIST	
	A CARTAGNA / AV CARTAGNA	_
. A	V-25BT6ENS / AV-25BT6ENB]	
•	MAIN PW BOARD ASS'Y·····	24
•	CRT SOCKETPW BOARD ASS'Y	28
•	FRONT CONTROL PW BOARD ASS'Y	28
•	HEADPHONE PW BOARD ASS'Y · · · · · · · · · · · · · · · · · · ·	28
	PA OKINO / PACKINO PARTO LICT	00

USING PW BOARD & REMOTE CONTROL UNIT

Model PWB ASS'Y	AV-25BT6ENS	AV-25BT6ENB
MAIN PWB	VE-20101572	+
CRT SOCKET PWB	VE-20094670	+
FRONT CONTROL PWB	VE-20084570	+
HEADPHONE PWB	VE-20079493	←
REMOTE CONTROL UNIT	VE-30017763 (RM-C1100)	←

EXPLODED VIEW PARTS LIST

⚠ Ref.No.	Part No.	Part Name	Description
↑ V01 ↑ L01 ↑ TR601 ↑ 2 ↑ 2 ↑ 3 ↑ 4	VE-30002750 VE-30012053 VE-30017522 VE-3500013 VE-20043532 VE-20000903 VE-20000872 VE-20046446	PICTURE TUBE (ITC) DEG COIL & EARTH CB. FBT TRF SPRING ON/OFF SWITCH BUTTON ON/OFF BUTTON ON/OFF LENS FRONT CABINET	(AV - 25BT 6ENS) (AV - 25BT 6ENB) (AV - 25BT 6ENS)
△ 4 △ 5 △ 6 △ 6 △ 7 8 9 △ 10	VE-20004131 VE-40000127 VE-20043545 VE-20003730 VE-35004456 VE-30001946 VE-30015614 VE-20086831	FRONT CABINET SWITCH ON/OFF 2.5A/100A BUTTON FUNCTION SILVER BUTTON FUNCTION BLACK BRAC.HP/STR 6382 SPEAKER 8R 15W (57X160) PFC TRF SHASSI BASE	(AV-25BT6ENB) (AV-25BT6ENS) (AV-25BT6ENB) (X2)
 ↑ 11 ↑ 12 ↑ 12 ↑ 13 ↑ 14 ↑ 16 ↑ 16 ↑ 17 ↑ 17 	VE-20094516 VE-20092523 VE-20101575 VE-20067720 VE-20067720 VE-35004572 VE-20102134 VE-20102164 VE-40009154 VE-40009152	CHASSIS FRAME REAR COVER REAR COVER AV TARMINAL BOARD SCREW (2.9X9.5) SCREW (4X20) RATING LABEL RATING LABEL LOGO JVC LOGO JVC	(AV-25BT6ENS) (AV-25BT6ENB) (X4) (X8) (AV-25BT6ENS) (AV-25BT6ENS) (AV-25BT6ENS)



PRINTED WIRING BOARD PARTS LIST

[AV-25BT6ENS / AV-25BT6ENB]

MAIN P.W. BOARD ASS'Y (VE-20101572)

RESISTOR R102 VE-30012657 SMD RES. 1/16W 1K J R450 VE-30012702 SMD RES. R103 VE-30012657 SMD RES. 1/16W 1K J R450 VE-30012702 SMD RES. R106 VE-30012713 SMD RES. 1/16W 75R J R459 VE-30012668 SMD RES. R107 VE-30012649 SMD RES. 1/16W 75R J R460 VE-30012668 SMD RES. R109 VE-30012713 SMD RES. 1/16W 75R J R460 VE-30012668 SMD RES. R110 VE-30012713 SMD RES. 1/16W 75R J R461 VE-30012668 SMD RES. R110 VE-30012713 SMD RES. 1/16W 75R J R462 VE-30012510 SMD RES. R111 VE-30012649 SMD RES. 1/16W 75R J R462 VE-30012510 SMD RES. R111 VE-30012649 SMD RES. 1/16W 75R J R467 VE-3000670 CF RES. R114 VE-30012713 SMD RES. 1/16W 75R J R468 VE-30000670 CF RES. R114 VE-30012713 SMD RES. 1/16W 75R J R468 VE-30000670 CF RES. R114 VE-30012713 SMD RES. 1/16W 75R J R469 VE-30000670 CF RES. R115 VE-30012713 SMD RES. 1/16W 75R J R469 VE-30012022 SMD RES. R115 VE-30012713 SMD RES. 1/16W 75R J R471 VE-30012662 SMD RES. R115 VE-30012713 SMD RES. 1/16W 75R J R471 VE-30012662 SMD RES. R118 VE-30012713 SMD RES. 1/16W 75R J R471 VE-30012662 SMD RES. R118 VE-30012649 SMD RES. 1/16W 75R J R474 VE-30012662 SMD RES. R118 VE-30012649 SMD RES. 1/16W 75R J R474 VE-30012662 SMD RES. R121 VE-30012649 SMD RES. 1/16W 75R J R481 VE-30012662 SMD RES. R121 VE-30012649 SMD RES. 1/16W 75R J R481 VE-30012666 CF RES. R123 VE-30000792 CF RES. 1/4W 75R J R482 VE-30012657 SMD RES. R124 VE-30012649 SMD RES. 1/16W 75R J R482 VE-30012657 SMD RES. R124 VE-30012649 SMD RES. 1/16W 75R J R488 VE-30012657 SMD RES. R124 VE-30012649 SMD RES. 1/16W 75R J R488 VE-30012657 SMD RES. R125 VE-30012657 SMD RES. 1/16W 75R J R486 VE-30012657 SMD RES. R125 VE-30012657 SMD RES. 1/16W 75R J R486 VE-30012657 SMD RES. R125 VE-30012657 SMD RES. 1/16W 75R J R486 VE-30012657 SMD RES. R125 VE-30012657 SMD RES. 1/16W 75R J R487 VE-30012657 SMD RES. R138 VE-30012657 SMD RES. 1/16W 75R J R486 VE-30012657 SMD RES. R139 VE-30012713 SMD RES. 1/16W 75R J R510 VE-30012657 SMD RES. R139 VE-30012713 SMD RES. 1/16W 75R J R510 VE-30012657 SMD RES. R144 VE-30012657 SMD RES. 1/16W 75R J R510 VE-30012657 SMD RES	Name Description	Part Name	Part No.	<u>∧</u> Symbol No.	Description	Part Name	Part No.	<u>∧</u> Symbol No.
R102 VE-30012657 SMD RES. 1/16W 1K J R450 VE-30012702 SMD RES. R103 VE-30012657 SMD RES. 1/16W 1K J R458 VE-30012510 SMD RES. R106 VE-30012713 SMD RES. 1/16W 15R J R459 VE-30012668 SMD RES. R107 VE-30012649 SMD RES. 1/16W 15R J R460 VE-30012668 SMD RES. R109 VE-30012713 SMD RES. 1/16W 75R J R460 VE-30012668 SMD RES. R110 VE-30012713 SMD RES. 1/16W 75R J R461 VE-30012668 SMD RES. R111 VE-30012649 SMD RES. 1/16W 75R J R462 VE-30012607 CF RES. R111 VE-30012649 SMD RES. 1/16W 75R J R462 VE-30012700 SMD RES. R111 VE-30012713 SMD RES. 1/16W 75R J R467 VE-30000670 CF RES. R113 VE-30012713 SMD RES. 1/16W 75R J R468 VE-30000670 CF RES. R115 VE-30012713 SMD RES. 1/16W 75R J R469 VE-30000670 CF RES. R115 VE-30012713 SMD RES. 1/16W 75R J R471 VE-30014022 SMD RES. R117 VE-30000792 CF RES. 1/4W 75R J R471 VE-30012662 SMD RES. R117 VE-30012713 SMD RES. 1/16W 75R J R471 VE-30012662 SMD RES. R118 VE-3012713 SMD RES. 1/16W 75R J R471 VE-30012662 SMD RES. R118 VE-3012713 SMD RES. 1/16W 75R J R471 VE-30012662 SMD RES. R118 VE-30012713 SMD RES. 1/16W 75R J R474 VE-30012662 SMD RES. R121 VE-30012713 SMD RES. 1/16W 75R J R474 VE-30012662 SMD RES. R121 VE-30012713 SMD RES. 1/16W 75R J R481 VE-30012662 SMD RES. R122 VE-30000792 CF RES. 1/4W 75R J R481 VE-30012667 SMD RES. R122 VE-30012649 SMD RES. 1/16W 150R J R481 VE-30012657 SMD RES. R124 VE-30012657 SMD RES. 1/16W 150R J R485 VE-30012657 SMD RES. R124 VE-30012657 SMD RES. 1/16W 150R J R485 VE-30012657 SMD RES. R126 VE-30012657 SMD RES. 1/16W 150R J R485 VE-30012657 SMD RES. R127 VE-30012657 SMD RES. 1/16W 150R J R485 VE-30012657 SMD RES. R138 VE-30012657 SMD RES. 1/16W 75R J R487 VE-30012657 SMD RES. R138 VE-30012657 SMD RES. 1/16W 75R J R487 VE-30012657 SMD RES. R138 VE-30012657 SMD RES. 1/16W 75R J R487 VE-30012657 SMD RES. R138 VE-30012657 SMD RES. 1/16W 75R J R500 VE-30012657 SMD RES. R139 VE-30012657 SMD RES. 1/16W 75R J R500 VE-30012657 SMD RES. R139 VE-30012657 SMD RES. 1/16W 75R J R510 VE-30012657 SMD RES. R149 VE-30012713 SMD RES. 1/16W 75R J R511 VE-30012657 SMD RES. R149			ISTOR	RES			ISTOR	RES
R174 VE-30012713 SMD RES. 1/16W 75R J R527 VE-30012692 SMD RES. R175 VE-30012713 SMD RES. 1/16W 75R J R528 VE-30012698 SMD RES. R176 VE-30012703 SMD RES. 1/16W 75R J R529 VE-30012698 SMD RES. R201 VE-30012674 SMD RES. 1/16W 27K J R530 VE-30012698 SMD RES. R202 VE-30012692 SMD RES. 1/16W 27K J R530 VE-30012698 SMD RES. R202 VE-30012692 SMD RES. 1/16W 4.7K J R532 VE-30012659 SMD RES. R204 VE-300012692 SMD RES. 1/16W 100 P R532 VE-30012659 SMD RES.	RES. 1/16W 560R J RES. 1/16W 100R J RES. 1/16W 220R J RES. 1/16W 120R J RES. 1/16W 120R J RES. 1/16W 130K J RES. 1/16W 2.7K J RES. 1/16W 2.7K J RES. 1/16W 2.7K J RES. 1/16W 2.7K J RES. 1/16W 1K J RES. 1/16W 16W J RES. 1/16W 100R J RES. 1/16W 100R J RES. 1/16W 100R J RES. 1/16W 100R J RES. 1/16W 2.2K J RES. 1/16W 2.2K J RES. 1/16W 2.2K J RES. 1/16W 2.2K J RES. 1/16W 5.6K J RES. 1/16W 2.2K J RES. 1/16W 1.0K J	SMD RESS. SMD RE	VE-30012702 VE-30012510 VE-30012668 VE-30012668 VE-30012668 VE-30012668 VE-30012668 VE-30012668 VE-30012660 VE-3000670 VE-30000670 VE-30000670 VE-3000670 VE-30012662 VE-30012662 VE-30012667 VE-30012657 VE-30012659 VE-30012641 VE-30012698 VE-30012698 VE-30012699 VE-3000471 VE-30006799 VE-3000799 VE-3000779	R450 R458 R459 R450 R458 R459 R461 R462 R467 R468 R467 R468 R469 R471 R472 R4774 R481 R482 R483 R4885 R486 R487 R507 R508 R510 R511 R512 R5114 R515 R516 R517 R518 R519 R527 R528 R527 R528 R529 R530 R5314 R517 R538 R526 R517 R518 R519 R527 R528 R527 R528 R527 R528 R527 R528 R527 R528 R527 R538 R530 R5314 R516 R517 R518 R517 R518 R516 R517 R518 R517 R518 R519 R527 R528 R527 R528 R527 R528 R527 R528 R527 R538 R530 R5314 R5316 R517 R538 R527 R538 R527 R538 R530 R540 R540 R540 R540 R540 R6510 R660 R660 R660 R6610 R6610 R6611	1/16W 1K J 1/16W 1SR J 1/16W 1K J 1/16W 1A TK J 1/16W	SMD RES.	VE-30012657 VE-30012657 VE-30012657 VE-30012713 VE-30012649 VE-30012657 VE-30012657 VE-30012657 VE-30012657 VE-30012657 VE-30012657 VE-30012713 VE-3012713 VE-3012713 VE-3012713 VE-3012713 VE-3012713 VE-3012713 VE-3012713 VE-3012713 VE-3012657 VE-30012657 VE-30012669 VE-30012650	R102 R103 R106 R107 R109 R110 R111 R113 R114 R115 R117 R118 R121 R122 R124 R126 R129 R135 R124 R126 R129 R135 R124 R127 R135 R124 R126 R129 R135 R137 R138 R139 R141 R155 R155 R155 R157 R157 R158 R159 R157 R159 R157 R159 R159 R159 R159 R159 R159 R159 R159

Δ	Symbol No.	Part No.	Part Name	Description
Δ	R668 R669 R670 R675 R677 R678 R680 R681 R682 R699 R690 R690 R700 R701 R703 R701 R701 R701 R701 R701 R701 R701 R701	VE-3000790 VE-30012510 VE-30012510 VE-30012510 VE-30012510 VE-30012510 VE-30012662 VE-30001244 VE-30001244 VE-30001269 VE-3000477 VE-3012509 VE-30017083 VE-3000718 VE-3000718 VE-3000718 VE-30000689 VE-30012509 VE-30012509 VE-30012669 VE-30012669 VE-30012669 VE-30012510 VE-3000459 VE-3000459 VE-30012510 VE-3012510 VE-3000526 VE-3012641 VE-3012641 VE-3012659 VE-3012641 VE-3012659 VE-3012641 VE-3012659 VE-3012641 VE-3012651 VE-3012641 VE-3012651 VE-3012659 VE-3012662 VE-30126641 VE-3012659 VE-30126641 VE-3012661 VE-3012661 VE-30126641 VE-3012661 VE-30126641 VE-30126641 VE-3012661 VE-30126641 VE-30126694	CF RESS. SMD RES	1/4W 6.8R J 1/16W 100R J 1/16W 100R J 1/16W 100R J 1/16W 2.7K J 1/2W 0.47R J 3W 220R J 1/16W 47R J 1/4W 47R J 1/4W 100K J 1/16W 100K J 1/16W 100K J 1/16W 4.7K J 1/16W 4.7K J 1/16W 4.7K J 1/16W 100K J 1/16W 100K J 1/16W 100R J 1/16W 100K J 1/16W 10K J
_	CAPA	CITOR		
	C141 C142 C143 C144 C145 C146 C147 C148 C149 C150 C157 C157 C157 C160 C161	VE-30007081 VE-30007081 VE-30012589 VE-30012589 VE-30012589 VE-30012589 VE-30012589 VE-30012589 VE-30012589 VE-30012560 VE-30012560 VE-3000352 VE-3000345 VE-30002573	EL CAP. EL CAP. SMD CAP. EL CAP. EL CAP. EL CAP. SMD CAP.	4.7UF 50V M (NPL) 4.7UF 50V M (NPL) 4.7WF 50V K 1.00FF 50V J 100FF 50V J 100FF 50V J 100FF 50V M 10UF 50V M

∆ Symbol No.	Part No.	Part Name	Description
CAP	ACITOF	₹	
			Description 1/16W 4.7K J 4.7W 50V M 4.7W 50V M 10WF 50V M 10WF 50V J 10WF 50V J 10WF 50V Z 330W 63V J 47WF 50V K 10WF 50V J 150W 63V J 150W 63V J 47WF 50V K 470WF 16V K 470WF 16V K 10WF 50V M 1.5WF 50V M 1.5W

Δ	Symbol No.	Part No.	Part Name	Description
_		CITOR		
Δ	C835 C838 C839 C840 C850 C851 C852 C857 C857 C858 C859 C860 C872	VE - 30012590 VE - 30000407 VE - 30000407 VE - 30000407 VE - 30000383 VE - 30012590 VE - 30000106 VE - 30007708 VE - 30009208 VE - 3000296 VE - 30007708	SMD CAP. EL CAP. EL CAP. EL CAP. EL CAP. EL CAP. SMD CAP. CER CAP. MKT CAP. CER CAP. CER CAP. CER CAP.	47NF 50V K 470UF 16V M 470UF 16V M 470UF 16V M 470UF 16V M 2200UF 25V M 220UF 25V M 47NF 50V K 2.2NF 4KV M 47NF 100V J 1NF 1KV K (PULSE) 100NF 100V Z F 1NF 1KV K (PULSE)
_	TRAN	ISF		
Δ	TR600 TR601 TR802	VE-30002090 VE-30017522 VE-30018785	LINE DRIVER FBT TRF SMPS TRF	
	COIL	_		_
	L101 L102 L106 L108 L109 L110 L111 L112 L113 L114 L115 L116 L117 L201 L210 L215 L401 L402 L403 L405 L408 L501 L408 L501 L408 L502 L503 L504 L600 L600 L701 L701 L701 L701 L701 L701 L701 L803 L700 L701 L701 L701 L701 L701 L701 L801 L701 L801 L701 L801 L701 L801 L701 L801 L701 L701 L701 L801 L701 L701 L701 L701 L701 L702 L703 L701 L704 L701 L704 L704 L704 L704 L704 L704 L704 L704 L704 L704 L704 L801 L704 L801 L704 L801 L803	VE-30001971 VE-3001992 VE-3001992 VE-3001971 VE-3001992 VE-3001971 VE-3001992 VE-3001971 VE-3001992 VE-3001971 VE-3001971 VE-30001971 VE-30001992	FERRITE BEAT FIXED COIL FERRITE BEAT FIXED COIL FERRITE BEAT FIXED COIL FERRITE BEAT FIXED COIL FERRITE BEAT	1UH 10UH 44MHZ 10UH 15MH 30UH 1MH 10UH
_	DIOD	ÞE		
	D105 D106 D107 D303 D405 D405 D409 D419 D413 D501 D505 D505 D506 D512 D513 D533 D601 D603 D605 D606 D609	VE-30007760 VE-30007760 VE-30007760 VE-30007763 VE-30001329 VE-30001284 VE-3001285 VE-30001285 VE-30001285 VE-30001285 VE-30001285 VE-30001285 VE-30001285 VE-30001377 VE-30001379 VE-30001329 VE-30001320 VE-30001323 VE-30001332	ZENER DIODE ZENER DIODE	

Δ	Symbol No.	Part No.	Part Name	Description
	DIOD	ÞΕ		
Δ	D610 D613 D614 D616 D617 D651 D653 D656 D657 D658 D659 D660 D661 D700 D801 D800 D801 D802 D803 D804 D805 D808 D809 D811 D812 D899 D811 D812 D899 D891 D891 D892 D893 D894 D897	VE-30001318 VE-30001318 VE-30001285 VE-30001285 VE-30001285 VE-30001285 VE-30007763 VE-30007763 VE-30001350 VE-30001350 VE-30001350 VE-30001350 VE-30001350 VE-30001315 VE-30001318 VE-30001315	DIOUE DIOUE DIOUE DIOUE DIOUE DIOUE DIOUE DIOUE ZENER DIODE DIOUE	
	TRAN	ISISTOF	₹	
Δ	0104 0106 0141 0142 0307 0316 0403 0503 0504 0601 0602 0603 0604 0605 0700 0801 0802 0804	VE - 30001457 VE - 30001458 VE - 30001454	TR T	
Δ	1 C 1C301 1C408 1C500 1C500 1C500 1C700 1C800 1C800 1C800 1C800 1C800 1C800	VE-30016113 VE-30014521 VE-20099532 VE-20093395 VE-30013985 VE-30013658 VE-3001968 VE-3001622 VE-30001622 VE-30001622 VE-30001506	IC IC IC IC IC IC IC IC IC	(SERVICE) (MICOM)

∆ Symbol No.	Part No.	Part Name	Description
ОТН	ERS		
<u>A</u> F801 <u>A</u> TH800 <u>A</u> TR801 TU201	VE - 30001731 VE - 30001270 VE - 30002104 VE - 30009637	FUSE PTC LINE FILTER TUNER	2.5A 9 OHM
VR800 X401 X402 X501	VE - 30001064 VE - 30001749 VE - 30015592 VE - 30002851	ADJ RES. XTAL XTAL XTAL	1/10W 470R
X700 Z401 Z402	VE - 30001756 VE - 30001705 VE - 30015591	XTAL SAW FILTER SAW FILTER	

CRT SOCKET P.W. BOARD ASS'Y (VE-20094670)

Δ	Symbol No.	Part No.	Part Name	Description
	RESI	STOR		
Δ	R900 R902 R903 R904 R906 R907 R908 R909 R910 R911 R912 R913 R914 R916 R917 R918	VE - 30000788 VE - 30000459 VE - 30000459 VE - 30000459 VE - 30000555 VE - 30000477 VE - 30000525 VE - 30000477 VE - 30001208 VE - 30001208 VE - 30000599 VE - 30000599	CF RES.	1/4W 6.8M J 1/4W 100R J 1/4W 100R J 1/4W 100R J 1/2W 150K J 1/4W 100K J 1/4W 100K J 1/2W 1.5K J 1/4W 100K J 1/2W 1.5K J 1/4W 100K J 1/2W 1.5K J 1/4W 100K J 1/4W 100K J 1/4W 100K J 1/4W 10K J 1/4W 220K J
	CAPA	CITOR		
	C900 C902 C903 C904 C905 C906 C907 C909 C910	VE-3000075 VE-30000415 VE-30000438 VE-30000295 VE-30000334 VE-30000350 VE-30000385 VE-30000438 VE-30000438	MKT CAP. EL CAP. CER CAP. CER CAP. CER CAP. EL CAP. BL CAP. BL CAP. BL CAP. BL CAP. BL CAP. CER CAP. CER CAP.	100NF 250V K (DC) 4.7UF 250V M 2.2NF 2KV 100NF 50V Z F 270PF 50V J S. 10UF 250V M 100NF 250V K (DC) 2.2UF 250V M 2.2NF 2KV 1NF 1KV M B
	COIL	-		
	L900	VE-30002170	COIL	
_	DIOD	ÞE		
	D901 D902 D903 D904 D905 D906 D907 D908 D909 NOT1	VE-30001329 VE-30001318 VE-30001329 VE-30001329 VE-30001284 VE-30001284 VE-30001284 VE-30001344 VE-30001344	DIODE DIODE DIODE DIODE DIODE DIODE DIODE ZENER DIODE DIODE	1A/1000V 30A
	TRAN	SISTOR	₹	
	Q900 Q901	VE - 30001427 VE - 30001454	TR TR	
_	IC			
	IC900	VE-30008721	IC	
	ОТНЕ	RS		
Δ	PL902 SG901 SG902 SG903 SG904	VE-30001855 VE-30000428 VE-30000428 VE-30000428 VE-30000428	CRT SOCKET SPARK GAP SPARK GAP SPARK GAP SPARK GAP	300V 300V 300V 300V

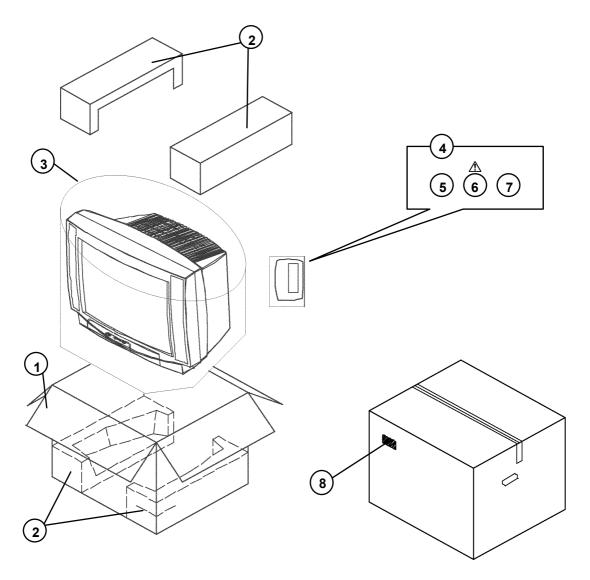
FRONT CONTROL P.W. BOARD ASS'Y (VE-20084570)

Δ	Symbol No.	Part No.	Part Name	Description
	RESI	STOR		
	R1 R2 R3 R4 R5	VE - 30000689 VE - 30000526 VE - 30000770 VE - 30000712 VE - 30000622	CF RES. CF RES. CF RES. CF RES. CF RES.	1/4W 3.9K J 1/4W 1.5K J 1/4W 680R J 1/4W 470R J 1/4W 270R J
	OTHE	RS		
	LD101* MD101 PL1203 PL1204 PL1205 S101 S102 S103 S104 S105	VE-30001279 VE-30001670 VE-30001884 VE-30001882 VE-30001883 VE-30002181 VE-30002181 VE-30002181 VE-30002181 VE-30002181	LED RED/GREEN PREMIPLIFIER RCA JACK RCA JACK RCA JACK SWITCH TACT SWITCH TACT SWITCH TACT SWITCH TACT SWITCH TACT SWITCH TACT	

HEADPHONE P.W. BOARD ASS'Y (VE-20079493)

∆ Symbol No.	Part No.	Part Name	Description			
RESISTOR						
R113 R114 R115 R116	VE - 30000744 VE - 30000744 VE - 30000712 VE - 30000712	CF RES. CF RES. CF RES. CF RES.	1/4W 560R J 1/4W 560R J 1/4W 470R J 1/4W 470R J			
COIL						
L103 L104	VE - 30001996 VE - 30001996	FIXED COIL	22UH Q40 K 22UH Q40 K			

PACKING



PACKING PARTS LIST

<u>∧</u> Ref.No.	Part No.	Part Name	Description
1 1 2 3 4 5 4 6 7	VE-50028494 VE-50028507 VE-20004294 VE-50026637 VE-7000587 VE-30017763 VE-50028493 BT-54013-2TK	CARTON BOX CARTON BOX CUSHION ASS'Y POLY BAG (1250*10 POLY BAG REMOTE CONTROL UN INST BOOK WARRANTY CARD	,
8 8	VE-20102134 VE-20102164	L AB EL L AB EL	(AV - 2 5 BT 6E N S) (AV - 2 5 BT 6E N B)

AV-	-25B	T6E	ENS
AV-	-25B	T6E	ENB

Memo

Memo



